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BLUFFTON, INDIANA



E. B. WILLIAMSON PAUL H. COOK



1922

SECOND PRINTING

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A Valuable Monthly Magazine Devoted to Flowers

A Bit of Personal Iris History.

BY E. B. WILLIAMSON.

At the outset I must confess that I have never kept the records that I should and that I cannot assign definite dates to certain events, a matter which, however, I believe is of minor importance. For example, I do not know now when I began planting Iris seeds. In 1909 I had growing in my small garden a number of species of Oncocyclus as well as a considerable number of various Apogons and Pogoniris. Many of the species of the last two subgenera had been obtained a year or two before from Mr. J. N. Gerard, and the Oncocyclus had been imported from Holland.

At this time I had possibly not more than fifteen or twenty varieties of Pogoniris, and I had no inkling of the great number of varieties even then on the market. been raising seed on these Pogoniris since about 1906, and the first seedlings began flowering about the time I had accumulated a fair lot of species and varieties in Apogon and Oncocyclus. Attracted at once by the peculiar colors of the flowers of several species of Oncocyclus, I dropped for a time all interbreeding of the Pogoniris varieties, and made all my crosses between species or varieties in different subgenera. I had on hand for this work a good stock of I. korolkowi in its several varieties, a number of bulbous Iris, including I. orchioides, as well as commoner things, several species of Oncocyclus, including susiana, iberica, gatesi, lorteti, paradoxa and one or two more whose names I have forgotten now, possibly fifteen or twenty species and varieties of Apogons, and an equal number of Pogoniris.

It soon became evident that crosses of Apogon with other subgenera were practically impossible and that nothing particularly attractive could be expected from such crosses. The only cross out of Apogen I ever accomplished was missouriensis x susiana, a weakly thing of no value. The Apogons could, however, be crossed among themselves and a number of such crosses were made. The only one of these of value to the flower grower was a cross of foliosa x fulva. Many seeds resulting from this cross were grown. The offspring varied greatly in color, some being almost as red as fulva, and from that, with less and less red, to the brilliant royal purple of the plant named for my mother, Dorothea K. Williamson. In Apogons it is more difficult than in other rhizomatous Iris to prevent pollination with pollen of the same variety, and I found many seed planted showing no hint of hybridization. This was true of I. foliosa, among these seedlings of foliosa a number of pure white ones appeared. I invariably lost these plants, however.

With the bulbous Iris I never raised any hybrids. All soon perished for me except orchioides, which seeded abundantly and whose seeds I have found easy to grow.

This left me with the Oncocyclus and the Pogoniris. Interbreeding of the Oncocyclus species promised something of interest but was impractical because of the great probability that such hybrids would be as difficult to grow as their parents and these I was able to keep in the garden only by frequent renewals. Under these circumstances the obviously most promising field lay in crossing Oncocyclus with Pogoniris. This was continued for several years. In no case, however, did I succeed in raising a hybrid between the two subgenera with a Pogoniris as a seed parent.

And the glorious lorteti, which flowered for me only once, and the giant gatesi, of which I had several flowers, likewise produced no seed. Certain other Oncocyclus also failed to set seed, but this disappointment was less keen than in the case of these two magnificent species. In fact, of the Oncocyclus available to me, I raised seed only on susiana, which proved to be such a good seeder that in a few years I had flowering in the garden fourteen distinct varieties from this one seed parent.

I. korolkowi in its several varieties also proved a good seeder and from it, crossed with Pogoniris, a still larger number of varieties was raised. Some of these hybrids, contrary to the larger number and to all the susiana hybrids, were fertile.

Northern Indiana did not seem favorable to the growth of these Oncocyclus and Regelia species and their hybrids, so a few years ago the entire collection was given to B. Y. Morrison to test out in the milder climate of the District of Columbia. I had given the following names to selected varieties of the Oncocyclus hybrids: Cherokee Maid, Maude Tribolet, Margaret Tribolet, and John W. Tribolet. None of the korolkowi hybrids was named.

While this work with susiana and korolkowi was going on I had been enlarging my collection of varieties of Pogoniris, and as Apogons and bulbous Iris failed and disappeared they were replaced by the easily grown and, to me, much more charming bearded Iris. At the same time some of the varieties obtained from Mr. Gerard had made a large increase. Among these was one, Amas, which had grown into a compact row possibly forty feet long. Flowers of this variety had failed each year to produce seed. About the year 1910, when the long row above referred to was at its prime, this variety produced at a conservative estimate five hundred flowers. Advantage was taken of some leisure time during its flowering period to cross pollinate every blossom in the row. Of several pods which gave some promise of fruiting only one yielded a seed. As I recall it this seed was the largest Pogoniris seed that I ever saw and from it grew the plant named for my father, Lent A. Williamson.

In 1915 I obtained a small tract of land near town and planted there a complete set of the bearded Iris offered for sale by Mr. Farr. In alternating rows with these were planted a set of my own seedlings then numbering about three hundred varieties. In 1918 Dr. Atkinson and Mr. Hall visited me during the flowering season and we went carefully over both collections, the named varieties and the unnamed seedlings, eliminating those we thought of no value or interest. As a result of this ruthless pruning my collection of named varieties shrunk to less than one hundred and of my seedlings a bare seventy remained. Many of those retained by us in 1918 have since been discarded and many additions have been made both to the named collection and to the selected seedlings. Of the latter, only one has been named, Mary Williamson, named for a daughter who has shown some intelligent interest in the Iris The plant grew from a seed which was one of a large lot of mixed seed planted in the autumn of 1916. the same lot of plants there also appeared a variety which was indistinguishable from Monsignor, which latter variety flowered for me the first time in 1917, so my plant was produced entirely independently of the original Monsignor.

Hints on Transplanting and Growing Pogoniris.

Iris can be transplanted any time the ground is not frozen. But an increasingly large number of growers are coming to regard the period soon after flowering as the most favorable time for digging. For our part we do all our transplanting and shall fill all orders with plants dug during the first dry period following the withering of the flowers, as we have found that plants dug during dry weather seem less likely to mildew and the rhizomes remain firmer than is the case with plants dug during wet weather. Rhizomes dug at this time can be cured by drying in well ventilated buildings. Such dried rhizomes will retain their vitality for a year or more, and can be shipped conveniently and cheaply all over the world. We are prepared to furnish either fresh or dried rhizomes at any time soon after the flowering period till late autumn, but we strongly recommend that plants be ordered with permission to us to ship some time in late June or early July when our season here is most favorable for digging.

Light and Soil. The sunnier the location the better. Because of the infinite complexities of soils, chemically, physically and biologically, and their many varieties, general formulas for soil treatment or improvement should be tried out usually in an experimental way. A safe rule, if the garden is doing well, is to continue such cultural and fertilizing methods as have generally proven effective in the neighborhood. For Pogoniris there should be good underground drainage, either natural or artificial. The soil should be of good fertility but free from fresh organic manures such as straw and leaves. A liberal supply of lime (calcium carbonate) is desirable and is most readily supplied by finely ground limestone which may be applied at the rate of one thousand pounds or more per acre. Bone meal is almost universally used as a satisfactory fertilizer. Ground gypsum (calcium sulphate) applied two or three hundred pounds per acre, supplies sulphur which seems to be a desirable element for Iris and is often wanting or deficient in long-cultivated soils.

Depth for Planting Rhizomes. The instructions generally given are to plant rhizomes barely beneath the surface or even with the upper half of the rhizomes exposed. Doubt-less soil texture and drainage are factors which enter into the problem. Personally we have never lost an Iris by too deep planting and we have lost some where we attributed the loss to too shallow planting. Moreover, we have frequently noticed in digging Iris that bits of rhizomes were lost and that the leaves shot up the succeeding spring from rhizomes buried often to a depth of eight inches. Of course there may have been other bits of rhizomes, buried at an equal or lesser depth, which perished. Of this we have no means of knowing positively, but we think the number of such lost rhizomes, which failed to make an appearance the succeeding year was negligible. In our soil about two or three inches seems as good a depth as any for planting. Plants need not be watered. The rootlets should be well spread and the ground over the rhizomes and rootlets tramped down hard, and a little loose soil drawn over the packed ground.

Cultivation. Only such cultivation as is required to keep out other plants seems necessary. No watering or irrigation is ever called for in this locality. Winter protection is desirable only for plants which have been set out late the preceding fall and which have been unable to make an anchoring root growth. Coarse straw or litter is preferable to tree leaves for cover. It should be removed in early spring and not allowed to remain on the plants. Iris can be burned over in the fall or in very early spring without detriment to the plants and often with beneficial effects in checking certain insects and in ridding the garden of weed seeds and loose litter. Iris should be reset about every three or four years and the soil enriched with some well rotted manure, wood ashes and bone meal, and freed from all grass roots. The best time to dig is during a relatively dry time soon after the flowers fade-sometime in late June or early July in this latitude.

Pests and Diseases. Iris are exceptionally free from disease and insect enemies, and only two, one a bacterial disease and the other a moth larva, seem to be serious and generally distributed in this country.

Root Rot. This is an insidious and destructive bacterial disease which in its maximum development reduces the lower parts of the leaf and flower stems and the entire rhizome to a stinking, semifluid mass. Some of the factors that encourage its development seem to be poor drainage, shade, accumulation about the plant of decaying vegetable matter (such as forest leaves and fresh manure) and physical injury and breaking of the plant tissues (such as crushing of the plant, the injuries of the moth larva discussed in the next section, and the unseasonable freezing of early leaf growth). As indicated by some of these contributing causes, good drainage should be provided, plants should be grown in sunny locations, leaves and accumulations of similar debris about and over the rhizomes should be removed, and the moth larva should be zealously guarded against. After severe damage to early spring growth by unseasonable freezes, the moisture of the killed and sodden leaves can be absorbed and the danger of the root rot nearly or quite removed by dusting the crowns of the plants freely with dry powdered gypsum. Several methods of treating diseased rhizomes have been recommended. These all involve the removal of the plant to a new location. For example, some say to lift the plant at once when the disease is discovered, carefully pare away all diseased parts and reset in another location. Others suggest treating the rhizome, after this cutting away of diseased parts, with one of two solutions: either corrosive sublimate solution, one part to one thousand of water, or a cherry red solution of potassium permanganate in water, placing the rhizome for a moment in either solution and then planting. Or powdered sulphur may be dusted over the rhizomes before replanting. We have found an effective way to check root rot is to take an old spoon with sharpened edges, and spoon out all the readily available diseased tissue, disturbing the plant as little as possible, and filling up the cavity in the rhizome and the opening in the soil with dry powdered Whether the resultant checking of the progress gypsum. of the disease is due to the dry powder thus brought against the exposed rhizomatous surface, or whether there is some chemical action, we do not know, but the method seems invariably successful and the damage to the plant and checking of its growth is materially lessened as

compared with that which takes place if the plants are reset. This gypsum treatment method is, moreover, much simpler and more economical in time and labor.

Information as to the nearest point at which gypsum can be obtained for any section of the country may be had by addressing The Gypsum Industries Company, 111 West Washington Street, Chicago, Illinois.

The Moth, Macronoctua onusta. The eggs of this destructive species are laid in September or October, and hatch the following April or May. The minute larva eats its way into the freshly grown leaves and takes up its home in the fold between the appressed blades of a leaf, from which it ranges voraciously for short distances, working lower and lower in the crown till it passes into the rhizome, where it feeds for some time, burrowing deeper and deeper, and finally emerging, when full grown, through the rhizome into the soil where it pupates.

The only known method of treatment is to capture each larva. If the injury to the leaves is detected at an early stage the leaves may be cut off with a sharp knife just below the larva, and the larva discovered and pinched to death. If it escapes observation till it has entered the rhizome it may be dragged from its retreat with a bit of hooked wire. Its presence in dug rhizomes can be readily detected if these rhizomes are kept for a day or two and then examined for the saw dust-like debris which accumulates in the vicinity of the larva. As a precautionary measure in dealing with this pest it will be well to clean the garden thoroughly of all debris as early as possible in the spring, and a burning over of the garden, if this is pos-sible, is recommended. But even this radical measure will not insure complete freedom from this pest, for we do not know well where the eggs are laid or what distance the larvae may travel to reach their plant food. The late spring freeze of 1921, which so seriously damaged Iris in many localities, so far as our observation went, had little or no effect in checking this insect pest.

Ants in the Garden. By H. F. Dietz. In regard to the ridding a garden of ants, I think that paradichlorobenzene will, if placed in the ant hills, kill out the ants. Cyanide solution will do the same thing; so will hot water. However, all these substances will injure plants and if the ant nests are in a clump of Iris or other plants, there is bound to be injury to this clump by the use of any of these three substances. In a case where a nest is around the roots of a plant, I believe that strong nicotine solution, one part of nicotine sulphate (Black Leaf 40) to three hundred parts of water, poured over the ground to saturate it, will kill out the nest. Of course, nicotine sulphate is too expensive to be used on a large scale and where the ants are infesting a considerable area I think that the best thing to use is a slow killing poison. Such poison can be prepared as follows:

tartar emetic one part
sugar ten parts
water one hundred parts
benzoate of soda one-third part

Reducing this to pints and ounces, we have one-eighth of an ounce of tartar emetic, one ounce of sugar, and two-thirds of a pint of water with just a pinch of sodium benzoate. The sodium benzoate makes this substance more attractive to the ants; that is, where the ants are attracted to any

kind of a sugar solution. But there are some ants that are not attracted to sweets and a person is up against it unless he determines this experimentally. This solution is prepared by boiling the sugar in the required amount of water and adding first the tartar emetic, and when this is dis-solved, the sodium benzoate. On cooling it can be placed in containers such as empty tobacco tins, that is cans such as those that Prince Albert and Tuxedo come in. The free side can be bent in slightly which allows the ants access to the inside of the can. A small quantity of the poison is placed on the bottom of the can and bits of sponge, rags or excelsior are dropped into the poison so that the ants can crawl over it and lap it up at their leisure without drowning The can should be sunk into the ground at a point in it. where the ants may find it, usually at some point along their line of travel. Of course, it must be allowed to project above the surface of the ground to prevent it from filling up during rains; or the can may be set at the base of the plants over which the ants are working and thus will be in their line of travel. We have found that this poison solution works admirably in the control of ants in the household. It has given effective results in a number of experiments which have been watched. The only objection to it is that it is not a quick method but requires from four to six weeks to kill out the nest. The principal on which this poison works is that the tartar emetic is not strong enough to kill the ants that carry it back to the nests, but being a cumulative poison, when fed to the young and to the queen in time will kill them. In the case that ants which do not feed on sugar are encountered, it is some-times advisable to try an old bone, such as a ham bone or a soup bone, smear a small quantity of tartar emetic into such meat as remains on this bone, and place it where the ants can get it. This has been effective for the non-sugar eating ants which are species that sometimes feed on other insects either dead or alive.



Raising Pogoniris Seed.

For the fertilization of the Iris ovule some agency outside of the flower itself is necessary to transfer the pollen to the stigma. Several such agencies doubtless operate in the case of Iris but insects, and especially bumblebees, are the most frequent pollen carriers in this locality.

Some of the garden varieties of Iris seldom if ever produce seed, though the pollen of these varieties may prove potent with the ovules of other varieties. On the other hand some varieties develop seed but the anthers are small and shrunken and never or seldom produce pollen.

If the flower grower wishes to raise many seed and especially if he wishes to hybridize certain varieties artificial pollination is necessary. In Pogoniris the anthers are mature when the flower opens and the pollen is released or is available soon after. On the other hand, the stigmas are not receptive till a few hours later, and, unless pollinated, they remain receptive till the second day or later.

The directions usually given for artificial cross-pollination are to pluck the anthers of one variety with a pair of fine pointed forceps and, so holding the anther, rub it over the stigma of the variety selected as the seed parent. It is generally assumed that if this transfer of pollen is made before other pollen has reached the stigma of the seed parent, the stigma soon becomes non-receptive and later effective pollination is impossible, but some hybridists, to make the matter certain, enclose the blossom from the time of opening till withering in some sort of bag or receptacle.

For cross pollinating we have found another method better adapted to our requirements. We go into the garden as soon in the morning as it is light enough to see and with sharp pointed forceps gather the anthers of the open and opening flowers into small round pill boxes, each box labelled with the name of the variety from which the anthers are gathered. This gathering is continued till all the anthers in the garden are collected. As the anthers are removed the lower half of one fall is torn off. Then the latter part of the day is given to placing this gathered pollen on the stigmas. This is done with a small camels hair brush. Several brushes are used. When changing to another variety of pollen, the brush previously used is whirled rapidly in a tumbler of water, pointed between the lips and laid in the sun to dry. A new dry brush is selected for the next pollen. Hence to carry out this procedure one should have a half dozen or more of these small brushes. The pollen not in use is kept in the uncovered pill boxes in a well ventilated room. If boxes are covered and the weather is humid, anthers will soon mildew. How long pollen will retain its vitality if kept in unopened, well aired boxes has not been determined, but we do not use pollen from anthers gathered more than thirty-six hours before. When a flower is pollinated the lower half of a second fall is torn off, one fall having been thus marked when the anthers were gathered. By this means one knows at a glance what treatment any individual flower has received.

Cross pollination records. If a record of both parents is desired it is necessary to label each flower at the time of pollinating with a small tag bearing the name of the

pollen parent. It is presumed the planting is labelled or plotted so the seed parent will be known when the ripened seed pod is gathered, thus giving the complete record. Dates of opening of flower, pollinating, and the ripening of the seed pod may be recorded. If only a record of the seed parent is desired no labeling is necessary.

When the seed pods are ripened and the apex in most varieties opening, the pods can be gathered each into the smallest size paper sack, bearing whatever data has been made, and the end securely folded over and pinned. These pods gathered daily, are dried in the sacks in the sun, and at the end of the season the sacks can be conveniently sorted and arranged, and the seed cleaned, sacked and properly labelled.



Suggestions For Planting Pogoniris Seed.

We have found that Iris seed vary greatly in size and shape among the different varieties which bear seed, and that there is also a great variation in size and vitality of seed grown on each variety. If seed are planted in a small area and the plants transplanted the following spring, these sterile seed and chaff occasion no difficulty. But if the seed are planted in permanent beds these sterile seeds result in a very unequal and ragged stand of plants and consequent bare areas of greater or less extent which can not be profitably employed.

In 1921 we tried placing seed in water to see if this simple gravity test would separate good seed from poor seed. The test seemed very satisfactory, and all our seed were run through water and the floating chaff and light seed were discarded. From the heavy seed planted we expect a higher percentage of germination than in former years, and the task of planting seed was materially lightened, as the test eliminated possibly fifty per cent of the seed grown.

In a paragraph above we have referred to two ways of planting seed, first, in a temporary bed from which the small seedlings are picked and set out in a permanent planting; and second, in permanent beds where the plants remain without being disturbed till they have flowered. Each method is briefly described below. We have always planted seed in September but we have no data which would or would not indicate some other time as more favorable.

Planting in a Temporary Bed. This may be a bed in the open or preferably a cold frame. The seeds are planted one half to one inch in depth. Rows to contain seed from different crosses of which it is desired to keep an accurate record should be made not less than three inches apart. When no record is to be kept the seed may be sown in more closely spaced rows.

When the seedlings have their fourth leaves, transplanting is easily and safely done. With reasonable care the loss from this operation is wholly negligible. It is not necessary to water the plants when resetting them.

Under the glass of a cold frame the seed germinate and make plants about thirty days earlier than those sown in the open.

Planting in a Permanent Bed. Rows can be spaced to suit but should permit of cultivation between rows. If one's area is not limited, rows thirty inches apart would be convenient. This year our plantings were made in rows alternating twenty-four and sixteen inches. The rows are made as straight as possible as this facilitates cultivation. Seed are planted in a furrow about an inch deep.

Pedigree of seed or seed parent is indicated by a label placed in the row. (A convenient form of label is described under another paragraph.) We always place our labels whether for seed or plants, north or east of the thing labeled, depending on the direction of the row.

A Convenient Form of Label and Stake for Iris.

An ink which is permanent on zinc can be made with the following recipe and can be prepared by any druggist.

Copper subacetate 1 dram
Ammonium chloride 1 dram
Lamp black ½ dram
Water 10 drams
Mix thoroughly.

Cut sheet zinc into small strips measuring three-quarters inch by two and three-quarters inches, with a hole punched near one end. Clean the surface and write with the above ink, using a rather coarse steel pen. Do not blot but allow ink to dry. The above label is wide enough to permit the writing of the name of the variety and the source from which the plant was obtained. For convenience in referring to labels it is well to write the data on both sides. We have found a stake eighteen inches long made of number nine galvanized iron wire with a ring turned on one end as convenient as any. The zinc label is attached to the ring with a bit of copper wire.

Unnamed Selected Seedlings of Pogoniris.

At the present time we have on hand and under observation a large collection of seedlings selected from year to year, from the thousands of plants we have grown. We are giving as much time in eliminating from this collection as in adding to it. We have finally, by consulting the opinions of others and by giving attention to the comments of visitors, reached a point where further elimination is slow and difficult. At the same time we are convinced only a limited number of these plants should be named. They have not the quality of Lent A. Williamson, but in the lot are many bright and distinct colors, including varieties which excel in vigor and flower production any named varieties of Pogoniris known to us.

We wish to know what other Iris lovers think of these varieties and in order to distribute them as widely as possible we have devised the following plan. We are going to make up sets, designated by letters, Set A, Set B, etc. Each set will contain five numbered seedlings, and will contain only those numbers and no others. That is, each Set A sent out will be identical with every other Set A sent out. And Set B, Set C, etc, will each contain other numbers, no numbers being duplicated in two or more sets. Each set will contain five full sized plants. The price will be \$5.00 a set, prepaid. We shall ask each purchaser of one or more sets to make a report on each variety received by him. These reports and the judgment of recognized Iris experts will in the future determine which of these varieties should be named.

We realize that the naming of new varieties of Pogoniris should be done only after mature observation by more than one person, and that a thorough testing in many gardens and weighing of the various opinions of many flower lovers is desirable. We believe a number of our seedlings are well worth naming and we are taking this method of distributing sets to obtain a consensus of opinion on varieties which appeal to us or others as having merit.

Mixed Seedlings of Pogoniris.

In accumulating a collection of selected seedlings it was necessary of course to grow thousands of plants. Many of these when they flowered were found to be identical or almost so with named varieties. Others were very similar to certain selected seedlings. These seedlings represent all the color classes of Pogoniris, and, growing together, make a charming and varied display of color. these mixed lots were sold and in every case where information was available we found the purchaser more than pleased with his plants when they flowered. In several cases enthusiasts wrote that their interest in Iris dated from the blooming of one of these collections. One gentleman with a large country place wrote that his bed of mixed seedlings yielded a larger and more attractive number of cut flowers than he was able to obtain from his large collection of named sorts. These results encourage us to continue the sale of these mixed seedlings which are offered at a price that about covers their cost to us. They are offered in sets of 125 plants for \$5.00, express collect. Each set is packed carefully in a bushel basket and the plants selected are in every case full sized rhizomes. cannot furnish these plants in smaller numbers than 125, as the cost of selecting and packing a smaller number would make the cheap price per plant impossible. our Iris are in flower visitors are welcome and plants may be selected from the beds of mixed seedlings and dug by the purchaser at twenty-five cents per plant. Many visitors have taken advantage of this offer, as they found among these seedlings many plants which made a strong appeal to them.

Mixed Pogoniris for Borders and Landscaping. Iris have been used extensively by landscape gardeners as borders for walks, drives and shrubbery plantings. Two species in general use for this purpose have been the nearly white Iris florentina and the purple Iris germanica, both early flowering species with relatively short duration of bloom. We believe that a thorough mixing of all the color classes is better adapted for such borders for several reasons. In the first place the period of bloom of such a border is thereby very much lengthened, the flowers of one variety disappearing to be replaced by the flowers of some later variety, and when the border is in its prime it reveals a wealth of harmonizing colors which a border of one variety cannot rival. From such a border of mixed Iris, plants may be selected from time to time to fill in some niche in the shrubbery border, in the garden or about the house where some particular color clump is desired. Our mixed Pogoniri3 seedlings, covering as they do all the color classes of Iris and including both early and late flowering variaties,

are ideal material for such mixed borders.

Tall Bearded Iris Lent A. Williamson.

(Figured in colors in Country Life, June, 1919.)

"Standards very broad, soft campanula violet (198-2); falls very large, velvety royal purple. Very brilliant golden beard. Extra large flower, strong grower, unusually fine."—Farr.

"This Iris was splendid this year; it was wonderfully large and beautiful and we were very much pleased with it. It bloomed beautifully this year and has been greatly admired. It is a very strong growing type, with a very large flower."—Farr.

"I saw it (L. A. W.) at Mr. Boyd's and in Rutherford, N. J., and at Wellesley Farms, and in each case it was perfectly magnificent."—Wister.

"Lent A. Williamson I consider better than Alcazar, even excelling Dominion."—Chas. S. Phillips.

Mr. A. J. Bliss has recently referred to Lent A. Williamson as the finest American seedling.

We have had reports of this Iris from as far south as Georgia and as far north as Minnesota, and it has demonstrated its adaptability in these widely separated localities.

Strong plants, \$5.00 each, prepaid.

Apogon Hybrid Dorothea K. Williamson.

Apogon hybrid, foliosa x fulva, half-tone figure and description by B. Y. Morrison in the Garden Magazine, September, 1919.

"The flowers are of the most extraordiary color. On first opening the texture is that of velvet so that the glowing royal purple is of exceeding depth. The style arms and bases of the flower parts are duller purple flushed with terra cotta and brownish hues. The accent comes from a thin line of yellow which shows on the falls in the place where the beardless Irises commonly have a yellow blotch."—Morrison,

At Washington, D. C., the flowering stalk was 4 feet high; at Bluffton, Indiana, 30 inches is a fair height.

"Dorothea K. Williamson is in bloom. The color is dark velvety purple and is far the richest color in my collection of over 100 varieties, including all the principal new creations."—J. H. Fiebing.

This Iris seems to prefer a rich, moist, but well drained location, in full sun, and for its best development it should have plenty of room.

Strong plants \$5.00 each, prepaid.

Tall Bearded Iris Mary Williamson.

Ruffled standards white very faintly tinged with lavender; flaring falls a deep hyacinth violet with a quarter inch border of white.

Stock very limited. Small plants \$5.00 each, prepaid.

Mixed Seedlings.

(See page 12) 125 strong plants \$5.00 collect.

Unnamed Selected Seedlings.

(See page 11) \$5.00 per set of 5 strong plants, prepaid.

Classification.

BY PAUL H. COOK.

All varieties of Pogoniris offered in this list are classified according to the following system. In this system the six principal divisions are based on the most obvious color of the flower, and the subdivisions are based on the modifying or less prominent color of the flower. The letters used to designate the various groups are: W(white), Y(yellow), L(lavender, or pale blue purple), B(blue purple), P(pink), and R(red purple). C(concolorous, or self colored), M(margin), S(standard), and F(fall) are used descriptively following the initial letter which designates the group. The last three letters, in every case following the letter designating the group, and followed in turn by an adjective which is one of the six group letters, are used in describing bicolors.

It will be seen that a brief but somewhat detailed color description may be given of any variety by taking in their descending order the letters designating the main color group and the subgroup or groups within which such variety falls; for example, WML describes Madame Chereau as a white flower margined lavender, and LYC describes Dalmarius as a concolorous blend in which lavender predominates.

Group W. White.

- C. Concolorous (Innocenza)
- With colored margins.
- L. Margined lavender (Mme. Chereau)
 - В. Margined blue purple Margined pink (Leda)
 - R. Margined red purple (Francina)
- S. With colored standards.
 - L. Colored lavender
 - в. Colored blue purple P.
 - Colored pink Colored red purple (Parisiana) R.
- F. With colored falls.
 - L.
 - Colored lavender Colored blue purple (Rhein Nixe) В.
 - P.
 - Colored pink
 Colored red purple (Anne Leslie) R.

Group Y. Yellow.

- C. Concolorous (Aurea)
- With colored margins. М.
- S. With colored standards.
 - With colored falls.
 - W. Colored white
 - L. Colored lavender (Darius)
 - В. Colored blue purple (Loreley)
 - Colored pink.
 - R. Colored red purple (Mithras)
 - Blended with lavender.
 - C. Concolorous blends
 - Bicolored blends (Nibelungen)
- P. Blended with pink.
 - Concolorous blends
 - Bicolored blends F.

Group L. Lavender.

- C. Concolorous (Dalmatica)
- Bicolored (Oriflamme)
 - Blended with yellow.
 - C. Concolorous blends (Dalmarius)
 - F. Bicolored blends (Mme. Blanche Pion)

Group B. Blue purple.

- C. Concolorous (Mary Gray)
- F. Bicolored (Othello)
- Blended with yellow.
 - C. Concolorous blends
 - F. Bicolored blends

Group P. Pink.

- C. Concolorous (Lohengrin)
- F. Bicolored (Windham)
- Blended with yellow.
 - C. Concolorous blends F. Bicolored blends (Her Majesty)

Group R. Red purple.

- C. Concolorous (Kochii)
- Bicolored (Rubella)
- Blended with yellow.
 - C. Concolorous blends

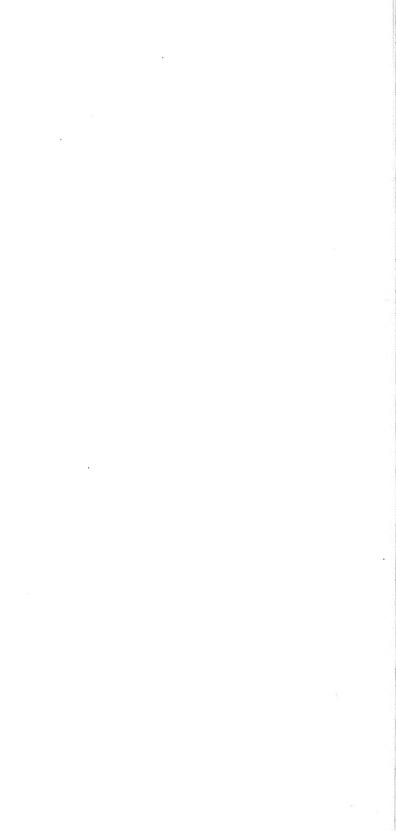
Standard Varieties.

Plants of the following standard varieties will be sent express collect at the price indicated per plant. If purchaser wishes plants sent by mail, add five cents per plant to the price.

Arnols RYF	\$.25
Aurea YC		.25
Berchta YLF		.25
Blue Jay BF		.50
Brunette YC		.25
Caprice RC		.50
Chester Hunt LF		.50
Dalmarius LYC		.25
Dalmatica LC		.25
Darius YFL		.25
Dr. Bernice YPF		.25
Empress YC		.25
Fro YFR		.25
Gajus YFR		.25
Hebe WML		.25
Helge YC		,25
Her Majesty PYF		.25
Hiawatha LF		.25
Isoline PYC	1	.00
James Boyd LF		.50
Juniata LC		.50
Kochii RC		.25
Leonidas RC		.25
Lohengrin PC		.50
Loreley YFB		.25
Major BF		.25
Mithras YFR		.25
Mandraliscae LC		.25
Mary Garden YLC		.50
Mme. Blanche Pion LYF		.25
Mme Chereau WML		.25

Mt. Penn RYC	,50
Monsignor RF	.50
Nibelungen YLF	.25
Nokomis WFB	.50
Oriflamme LF	1.00
Pauline RC	.50
Pfauenauge YLF	.25
Princess Victoria Louise YFR	.50
Purple King RC	.25
Quaker Lady LYC	.50
Rhein Nixe WFB	.50
Rose Unique RC	.50
Rubella RF	.25
Sherwin Wright YC	.50
Standard Bearer RC	.25
Trautlieb PC	.50
Violacea Grandiflora LC	.25
Windham PF	.50
Wyomissing PVF	.50







THE LONGFIELD IRIS FARM BLUFFTON, INDIANA.